**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

WSOU INVESTMENTS, LLC D/B/A BRAZOS LICENSING AND DEVELOPMENT,	§ § § §	Civil Action No. 6:20-00952-ADA
	§	Civil Action No. 6:20-00953-ADA
Plaintiff,	§ §	Civil Action No. 6:20-00956-ADA
	§	
v.	§	
	§	JURY TRIAL DEMANDED
ONEPLUS TECHNOLOGY (SHENZHEN) CO., LTD.,	§ §	
	§	
Defendant.	§	

PLAINTIFF'S RESPONSIVE CLAIM CONSTRUCTION BRIEF (GROUP I PATENTS)

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I.   INTRODUCTION

Plaintiff WSOU Investments, LLC (d/b/a Brazos Licensing and Development) ("WSOU")

submits this brief in support of its proposed constructions for the disputed claim terms of U.S.

Patent Nos. 7,477,876 ("the '876 patent"), 8,149,776 ("the '776 patent"), and 8,767,614 ("the '614

patent"), and in response to Defendant OnePlus's opening brief concerning these patents (Dkt. 32).

WSOU respectfully requests that the Court adopt its proposed constructions for the ten

disputed claim terms, which for the most part are the terms' plain and ordinary meanings. OnePlus,

on the other hand, is seeking to depart from the plain and ordinary meanings, alleging that nine of

the ten disputed terms are means-plus-function terms governed by 35 U.S.C. § 112, ¶ 6. Of those

nine terms, which are all found in the '776 or '614 patents, only two terms actually include the

word "means." For those other seven that do not use the word "means," OnePlus must overcome

a presumption that they do no invoke § 112, ¶ 6. They cannot meet that burden, however. Indeed,

the claims provide sufficient structure to support the claimed functionalities.

The Court should also reject OnePlus's assertion that the nine alleged means-plus-function

terms in the '776 and '614 patents are indefinite. Even if all nine terms were truly means-plus-

function (which they are not), the patents provide sufficient structural support such that a person

of ordinary skill in the art ("POSA") would have reasonable certainty about the scope of the claims.

OnePlus cannot establish indefiniteness by clear and convincing evidence, as required by law.

II.   U.S. PATENT NO. 7,477,876 ("THE '876 PATENT")

A.   Background

The '876 patent relates to a channel quality feedback method for wireless transmission in

which the rate for reporting channel quality information from a mobile station to a base station is

variable as a function of the presence or absence of a transmission from the base station to the

mobile station. *See* Ex. A[1] at Abstract.

WSOU is asserting against OnePlus claims 1, 4, 9 and 10, of which claim 1 (drawn to a

method of transmitting channel quality information) and claim 9 (drawn to a method of adapting

the rate of reporting channel quality information) are independent claims.

B.   **Disputed Terms**[2]

1.   **"varying a rate for reporting channel quality information from a mobile station to a base station as a function of the presence or absence of a reception of a data transmission at the mobile station"** (Claim 1)

WSOU's Proposed Construction	OnePlus's Proposed Construction
Plain and ordinary meaning, which is: varying a rate for reporting information about the status of the communication channel from a mobile station to a base station as a function of the presence or absence of a reception of a data transmission at the mobile station	varying a rate for reporting channel quality information from a mobile station to a base station using only the mobile station's detection of the presence or absence of an actual data transmission from the base station as the trigger for varying the rate, and not varying the rate based on the content of the data transmission or any other message or signal instructing such action

The Court should construe the term "varying a rate for reporting channel quality

information from a mobile station to a base station as a function of the presence or absence of a

reception of a data transmission at the mobile station" in claim 1 of the '876 patent to have its plain

and ordinary meaning, which is WSOU's proposed construction. The parties' dispute centers

around whether the Court should, as OnePlus seeks, import a limitation allegedly based on the

prosecution history. Specifically, OnePlus's proposal would permit varying the reporting channel

quality information rate using **_only_** the mobile station's detection of the presence or absence of an

actual data transmission as the trigger for varying the rate, and **_not_** varying the rate based on the

content of the data transmission or any other message or signal instructing such action. OnePlus's

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[1] References herein to Ex. A-F refer to the corresponding exhibits to OnePlus's brief (Dkt. 32).

[2] Claim terms of the '876 patent not disputed herein have their plain and ordinary meanings.

proposed limitation is not supported, would unduly narrow the claim scope, and should be rejected.

While claim 1 requires that the reporting rate be varied "as a function of the presence or absence of a reception of a data transmission at the mobile station," neither claim 1 nor anywhere else in the intrinsic record supports a construction that would limit use to ***only*** that information, to the exclusion of any other information, as a basis for varying the rate. Contrary to OnePlus's contention, WSOU never "surrendered" using other types of information in varying the reporting rate, nor is WSOU now seeking to recapture disclaimed subject matter. Dkt. 32 at 3.

OnePlus tries to hang its hat on statements Applicants made in response to certain rejections during prosecution, but seeks to apply those statements more broadly than the context in which they were made. For example, in response to the Examiner's anticipation rejections based on the Chen patent, Applicants asserted that Chen disclosed varying the rate using only an instruction (*i.e.*, the content of a data transmission), but notably did not disclose varying the rate as a function of the presence or absence of a reception of a data transmission at the mobile station, as recited in the claims. Ex. C at 6-7; Ex. D at 5.

Contrary to OnePlus's assertion (Dkt. 32 at 4), Applicants never stated that the claims permitted the reporting rate to be varied using "only" the mobile station's detection of the presence or absence of a data transmission. Rather than constituting "a clear and unmistakable disavowal of the technique disclosed in Chen," as OnePlus contends (Dkt. 32 at 5), Applicant's prosecution statements merely noted what the plain language of claim 1 requires: that the reporting rate be varied as a function of the presence or absence of a reception of a data transmission at the mobile station. Because Chen did not disclose an express element of claim 1, it was not anticipatory.

OnePlus's narrow proposed construction attempts to prohibit the use of inter-process communications within the mobile device, which can be used, for example, to detect the absence

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or presence of data transmission from the base station. Applicants, however, did not exclude "varying the rate based on the content of the data transmission or any other message or signal instructing such action," as OnePlus's proposed construction would provide. Applicants' remarks cited by OnePlus merely differentiated the claimed invention from the usage of a "separate signaling message from the base station."

III.   U.S. PATENT NO. 8,149,776 ("THE '776 PATENT")

A.   Background

The '776 patent relates to methods, apparatuses, and computer programs for attempting access to a wireless network by sending a preamble comprising a randomly selected signature sequence on a random access channel, and, if determined to be unsuccessful, re-attempting access by sending a second preamble comprising a second signature sequence of a power no greater than that of the first signature sequence. *See* Ex. E at Abstract. The patent explains by using a transmit power for the second access attempt that is no greater than the transmit power of the first access attempt, the invention avoids needless power consumption and added computational complexity, decreases interferences caused by the second preamble, and increases the likelihood of a successful access attempt. *Id*. at 2:26-40, 5:18-29.   As summarized in the flowchart of Figure 5 of the '776 patent, reproduced to the right, the disclosed invention generally involves a number of steps.

FIG.5

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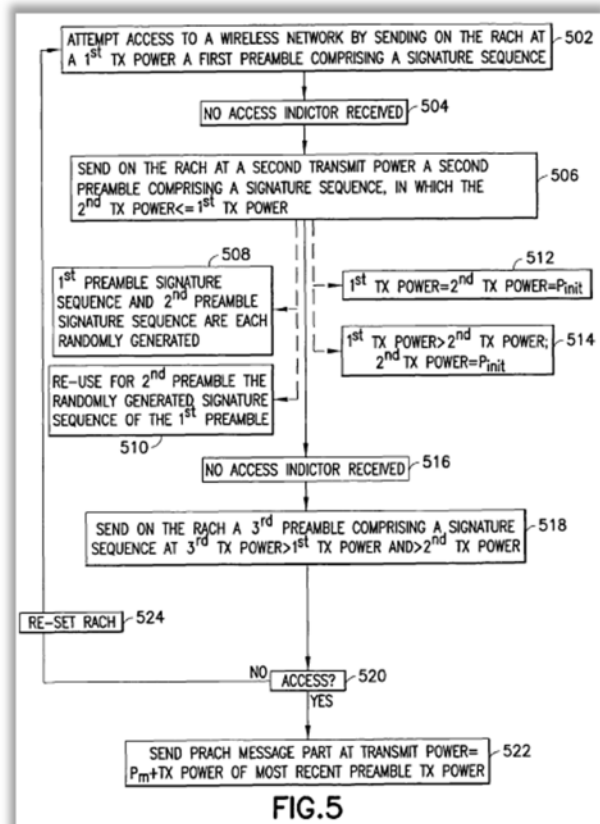
WSOU is asserting against OnePlus claims 1-3, 5, 7-9, 10-12, 14-16, and 18-20, of which claim 1 (drawn to a method), claim 10 (drawn to an apparatus), and claim 19 (drawn to a non-transitory computer readable medium storing a program of instructions) are independent claims.

B.   Disputed Terms[3]

      1.   "[transmitter] attempting access to a wireless network" (Claim 1) / "transmitter configured to attempt access to a wireless network..." (Claim 10)

WSOU's Proposed Construction	OnePlus's Proposed Construction
Plain and ordinary meaning. This claim should not be construed under 35 U.S.C. § 112, ¶ 6, nor is it indefinite.	This claim should be construed under 35 U.S.C. 112, ¶ 6. Function: attempting access to a wireless network by sending on a random access channel at a first transmit power a first preamble comprising a signature sequence and by randomly selecting the signature sequence from a set of signature sequences Structure: none disclosed The claim is indefinite.

      a.   The "Transmitter" Claim Elements Do Not Invoke § 112, ¶ 6

Claim 1 is directed to a "method comprising: attempting access to a wireless network by sending from a transmitter … a first preamble comprising a signature sequence that is randomly selected from a set of signature sequences …"; and claim 10 is directed to an "apparatus comprising: a transmitter configured to attempt access to a wireless network by sending … a first preamble comprising a signature sequence that is randomly selected from a set of signature sequences …" Ex. E at claims 1, 10. These two phrases have their plain and ordinary meanings. They are not, as OnePlus contends, governed by 35 U.S.C. § 112, ¶ 6, nor indefinite.

As an initial matter, the disputed claim phrases do not use the word "means." Accordingly, a presumption that these phrases are not means-plus-function terms applies. *Williamson v. Citrix*

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[3] Claim terms of the '776 patent not disputed herein have their plain and ordinary meanings.

Online, LLC, 792 F.3d 1339, 1350 (Fed. Cir. 2015). OnePlus cannot rebut this presumption.

"Transmitter" has a well-understood meaning in the art. Ex. G, Cooklev Decl. at ¶ 39.[4]

Although courts may consider certain terms (*e.g.*, "module") to be "well-known nonce word[s]

that can operate as a substitute for 'means' in the context of § 112, para. 6," *Williamson*, 792 F.3d

at 1350; "'[t]ransmitter' is not a nonce term." *Finjan, Inc. v. Eset, LLC*, No. 3:17-cv-183, 2017

WL 5501338, at *3 (S.D. Cal. Nov. 14, 2017). The term "transmitter" connotes sufficient structure

to a POSA and should not be construed under § 112, ¶ 6. *See, e.g., Finjan, Inc. v. Qualys Inc.*, No.

4:18-CV-7229, 2020 WL 3101040, at *15-16 (N.D. Cal. June 11, 2020) (holding that claim term

"transmitter" was not means-plus-function and not indefinite). Similarly, the phraseology

"transmitter configured to," as recited in claim 10, does not trigger § 112, ¶ 6. *See, e.g., Huawei*

Techs. Co. Ltd. v. T-Mobile US, Inc., No. 2:16-cv-57, 2017 WL 2691227, at *25-27 (E.D. Tex.

June 22, 2017) (holding that the claim phrase "a transmitter configured to receive," "send," or

"deduce" were not means-plus-function terms nor indefinite where the "claim language further

describe[d] the inputs and outputs of these components, and what it is that they "receive," "send,"

or "deduce").

The "transmitter" elements recited in claims 1 and 10 connote sufficient structure to avoid

means-plus-function treatment. A POSA would understand from the claims that the transmitter is

a component that would send signals to access a wireless network, and communicate with other

components of the device, such as the processor. Ex. G, Cooklev Decl. at ¶¶ 39-40. OnePlus's

argument that the claims are devoid of structure is premised on an incorrect assumption that the

claimed transmitter itself must function to randomly select a signature sequence. Dkt. 32 at 9-10.

Claims 1 and 10 require that the transmitter attempt to access a wireless network by sending

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[4] "Ex. G" refers to the Declaration of Todor Cooklev, Ph.D., attached as Exhibit G to this brief.

"a first preamble comprising a signature sequence that is randomly selected from a set of signature sequences." Ex. E, at claim 1, 10. Contrary to OnePlus's suggestion, nowhere do the claims indicate that the transmitter itself must perform the random selection process. Rather, the specification explains that the user equipment ("UE") includes components in addition to the transmitter—for example, processors and memory—and that the UE randomly selects the signature sequence from a set of sequences. *See, e.g.*, Ex. E at 2:44-3:34 ("[T]he processing means randomly selects from a set of signature sequences."), 5:62-6:24 ("[T]he UE randomly selects a signature sequence and submit a first preamble that has the randomly generated/selected signature sequence on the RACH"); *see also id*. at, 3:55-57, 3:61-64, 4:63-5:17, 9:22-41, 10:19-49, 11:26-60, Figs. 3, 5, 6A, 6B; Ex. G, Cooklev Decl. at ¶ 49. Indeed, claim 11 recites that "the processor is configured to randomly select from the set of signature sequences the first preamble …" *Id*. at claim 11. In short, the very premise of OnePlus's "transmitter" argument fails because random selection of a signature sequence is not necessarily a function of the claimed transmitter. Even if OnePlus's assumption were correct, it would not change the outcome because the '776 patent anticipates the possibility of a processor being embodied in or disposed across the various components of the device and the transmitter can include a processor that performs the random selection. *See, e.g.*, Ex. E at 11:43-12:35; Ex. G, Cooklev Decl. at ¶¶ 43-46.

At bottom, the claims indicate to a POSA what type of information the transmitter will transmit and how it will interact with other components to access a wireless network. Ex. G, Cooklev Decl. at ¶ 49. Accordingly, the "transmitter" claim terms do not invoke § 112, ¶ 6.

    b. **The "Transmitter" Claim Elements Do Not Render the Claims Indefinite**

A defendant must be prove an indefiniteness defense by clear and convincing evidence. *Sonix Tech. Co., Ltd. v. Publications Int'l, Ltd.*, 844 F. 3d 1370, 1377 (Fed. Cir. 2017). OnePlus

cannot satisfy this heavy burden. The Court should reject OnePlus's indefiniteness argument at

the outset because the argument is premised entirely on OnePlus's contention that the "transmitter"

claim phrases are means-plus-function terms, which they are not.

Moreover, even if, *arguendo*, the "transmitter" claim terms invoked § 112, ¶ 6, the

specification discloses sufficient structure to avoid a finding of indefiniteness. *See supra*

§ III.B.1.a. OnePlus argues that the specification allegedly "fails to disclose an algorithm" for the

transmitter's function, but "[a]n algorithm in the computer arts is a broad concept used 'to identify

a step-by-step procedure for accomplishing a given result,' and may be expressed 'in any

understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any

other manner that provides sufficient structure.'" *Realtime Data, LLC v. Rackspace US, Inc.*, No.

6:16-cv-961, 2017 WL 2590195, at *16-17 (E.D. Tex. June 14, 2017) (quoting *Typhoon Touch*

Techs., Inc. v. Dell, Inc., 659 F.3d 1376, 1385 (Fed. Cir. 2011); *Finisar Corp. v. DirecTV Grp.*,

523 F.3d 1323, 1340 (Fed. Cir. 2008)). For example, the specification includes a sequence

selection table (Fig. 3), a flow chart of operations and results of executing computer program

instructions by a data processor (Fig. 5), diagrams showing components of exemplary electronic

devices (Figs. 6A and 6B), and prose (*supra* § III.B.1.a) that explain to a POSA how the transmitter

and other components are to function and interact with one another. Ex. G, Cooklev Decl. at ¶ 49.

The "transmitter" claim elements are not indefinite.

2.   "processor" (Claims 10, 11, 12, 14, 15, 16, 18, 19)

WSOU's Proposed Construction	OnePlus's Proposed Construction
Plain and ordinary meaning. This claim should not be construed under 35 U.S.C. § 112, ¶ 6, nor is it indefinite.	This claim should be construed under 35 U.S.C. 112, ¶ 6. <u>Function</u>: determining that access attempts are unsuccessful <u>Structure</u>: none disclosed The claim is indefinite.

a.   "Processor" Does Not Invoke § 112, ¶ 6

Claim 10 is also directed to an "apparatus comprising: … a processor configured to determine that the access attempt from the first preamble was unsuccessful, and responsive to such determining to cause the transmitter to re-attempt access to the wireless network by causing the transmitter to send on the random access channel at a second transmit power a second preamble comprising a signature sequence, in which the second transmit power is no greater than the first transmit power." Ex. E, claim 10. Claims 11, 12, 14, 15, 16, 18, and 19 depend, either directly or indirectly, from claim 10. Like the "transmitter" claim phrases, "processor" has its plain and ordinary meanings and does not require construction, is not governed by 35 U.S.C. § 112, ¶ 6.

Because the "processor" claim element does not use the word "means," OnePlus must overcome the presumption that the term is not means-plus-function. *Williamson*, 792 F.3d at 1350. OnePlus cannot meet its burden.

"Unlike the term 'module' in *Williamson*, 'processor' is not a 'nonce word.'" *Smartflash LLC v. Apple Inc.*, No. 6:13-cv-447, 2015 WL 4208754, at *3 (E.D. Tex. July 7, 2015). "'[P]rocessor' … rather connotes a class of structures." *Cellular Commc'ns Equip. LLC v. AT&T, Inc.*, No. 2:15-cv-576, 2016 WL 7364266, at *15-16 (E.D. Tex. Dec. 19, 2016); *see also Panoptis Patent Mgmt., LLC v. Blackberry Ltd.*, 2017 WL 497571, No. 2:16-cv-62, at *18-19 (E.D. Tex. Feb. 7, 2017) (same); *Realtime Data, LLC v. Rackspace US, Inc.*, No. 6:16-cv-961, 2017 WL 2590195, at *16-17 (E.D. Tex. June 14, 2017) (same); *Realtime Data, LLC v. Rackspace US, Inc.*, No. 6:16-cv-961, 2017 WL 2590195, at *16-17 (E.D. Tex. June 14, 2017) (same).

"A 'processor' in the computer arts is commonly understood to refer to the component of a computer that executes software instructions and performs computations." *Typemock, Ltd. v. Telerik, Inc.*, No. 17-cv-10274, 2018 WL 4189692, at *7 (D. Mass Aug. 31, 2018). "[A]s … courts

have noted, processor generally refers to a tangible object that can be purchased and that can perform certain functions even without specific instructions. Thus, unlike terms such as 'means,' 'element,' and 'device' that typically do not connote structure, 'processor' can on its own recite at least some structure to persons of ordinary skill in the art." *Fisher-Rosemount Sys., Inc. v. ABB Ltd.*, No. 4:18-cv-178, 2019 WL 6830806, at *16 (S.D. Tex. Dec. 12, 2019) (internal citation omitted). "The term processor is 'not used as generic terms or black box recitations of structure or abstractions, but rather as a specific reference' to processors that are known in the art." *Id.* (quoting *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1008 (Fed. Cir. 2018)).

"Courts have held that the term "processor" sufficiently connotes structure where the claim describes how the processor interacts with the invention's other components and identifies where the processor is located." *Fisher-Rosemount Sys., Inc. v. ABB Ltd.*, No. 4:18-cv-178, 2019 WL 6830806, at *16 (S.D. Tex. Dec. 12, 2019); *see, e.g.*, *Clear Imaging Research, LLC v. Samsung Elecs. Co., Ltd.*, 2020 WL 6384731, *8-9 (E.D. Tex. Oct. 30, 2020) (holding the claim phrase "processor configured to determine [values]…; modify [images] …; and combine the modified images" was not a means-plus-function term nor indefinite because "processor" was "not a nonce term" and was "accorded its customary meaning of a class of structures on which software can run"); *Huawei Techs. Co. Ltd. v. T-Mobile US, Inc.*, No. 2:16-cv-57, 2017 WL 2691227, at *25-27 (E.D. Tex. June 22, 2017) (holding that the claim phrase "processor configured to deduce authentication vector (AV)-related keys according to a root key of the MME" was not a means-plus-function term and not indefinite); *SyncPoint Imaging, LLC v. Nintendo of Am. Inc.*, No. 2:15-cv-247, 2016 WL 55118, at *19-20 (E.D. Tex. Jan. 5, 2016) (holding the claim phrase "processor ... for processing ..." was not a means-plus-function term because, *inter alia*, "processor connotes structure" and "was not a nonce word"); *Finjan, Inc., v. Proofpoint, Inc.*, No. 13-cv-5808, 2015

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WL 7770208, at *11 (N.D. Cal. Oct. 2, 2015) ("Independent Claim 1 describes how the 'content processor' interacts with the invention's other components (the transmitter and receiver), which informs the term's structural character.")

Independent claim 10 and dependent claims 11, 12, 14, 15, 16, 18, and 19 provide sufficient structure to avoid means-plus-function treatment. The claims explain that the apparatus contains a processor and how the processor will interact with other components of the device, such as a transmitter or memory. Ex. G, Cooklev Decl. at ¶¶ 51-52. By way of example, claim 10 discloses "a processor configured to determine that the access attempt from the first preamble was unsuccessful, and responsive to such determining to cause the transmitter to re-attempt access to the wireless network by causing the transmitter to send on the random access channel at a second transmit power a second preamble comprising a signature sequence, in which the second transmit power is no greater than the first transmit power." Ex. E, at claim 10. A POSA would understand from the '776 patent what a processor is and what it would do within the claimed device. Ex. G, Cooklev Decl. at ¶¶ 51-52.

OnePlus's reliance on this Court's claim construction opinion in *Dyfan, LLC v. Target Corp.*, No. 6:19-cv-179-ADA, 2020 WL 8617821 (W.D. Tex. Nov. 25, 2020), is misplaced.[5] The disputed claims in *Dyfan* did not use the term "processor." Rather, the disputed claim phrase was "said code, when executed, further configured to ... cause to be output, via the at least one mobile device, the second visual information based on the second location-relevant information." *Id*. at *4. The Court found that the particular claims at issue did not provide sufficient structure for the "code." Here, however, the claims indicate to a POSA what information the processer will receive

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[5] The *Dyfan* decision is currently on appeal before the Federal Circuit (Case No. 21-2175), where it is fully briefed and awaiting an oral argument date.

and generate and how it will interact with other components to access a wireless network. Accordingly, the claim term "processor" does not invoke § 112, ¶ 6.

OnePlus also improperly relies on *Aristocrat Technologies Australia Pty Ltd. v. International Game Technology*, 521 F.3d 1328, 1333 (Fed. Cir. 2008), for the proposition that "processor" provides insufficient structure to avoid invoking § 112, ¶ 6, because the claims do not recite an algorithm. Dkt. 32 at 12. Again, the claims there did not recite "processor." But, more importantly, the parties in that case agreed that each of the disputed claim terms—each of which expressly recited "control means"—was indeed a means-plus-function term that invokes 35 U.S.C. § 112 ¶ 6." *Aristocrat Techs.,* 521 F.3d at 1331. Thus, contrary to OnePlus's suggestion, the issue there was not whether § 112, ¶ 6 was applicable.

b.   The Term "Processor" Does Not Render the Claims Indefinite

OnePlus cannot show by clear and convincing evidence that the term "processor" is indefinite. Because OnePlus's indefiniteness argument is based entirely on its contention that "processor" is a means-plus-function term, which it is not, the Court should rejected it.

Even if, *arguendo*, "processor" invoked § 112, ¶ 6, the specification discloses sufficient structure to avoid a finding of indefiniteness. *See supra* § III.B.2.a. For example, Figures 5, 6A, and 6B, and their corresponding disclosures in the patent specification (Ex. E at 9:22-12:31) provide sufficient structure and algorithm to perform the claimed functions, including how the processor and other components are to function and interact with one another. Ex. G, Cooklev Decl. at ¶¶ 53-57. The term "processor" is not indefinite.

3.   "program of instructions" (Claim 19)

WSOU's Proposed Construction	OnePlus's Proposed Construction
Plain and ordinary meaning. This claim should not be construed under 35 U.S.C. 112, ¶ 6, nor is it indefinite.	Preamble limiting; This claim should be construed under 35 U.S.C. 112, ¶ 6. Function: attempting access to a wireless network by sending a signature sequence on a random access channel Structure: none disclosed The claim is indefinite.

a.   "Program of Instructions" Does Not Invoke § 112, ¶ 6

Claim 19 recites: "A non transitory computer readable memory storing a ***program of instruction*** that when executed by a processor result in actions comprising: attempting access to a wireless network by sending on a random access channel at a first transmit power a first preamble comprising a signature sequence that is randomly selected from a set of signature sequences; responsive to determining that the access attempt from sending the first preamble was unsuccessful, re-attempting access to the wireless network by sending on the random access channel at a second transmit power a second preamble comprising a signature sequence, in which the second transmit power is no greater than the first transmit power." Ex. E, at claim 19. The phrase "program of instructions" does not require construction and has its plain and ordinary meaning. The Court should reject OnePlus's contention that this claim phrase invokes § 112, ¶ 6.

Claim 19 does not state "means." OnePlus thus must overcome the presumption that the disputed term is not means-plus-function. *Williamson*, 792 F.3d at 1350. OnePlus cannot do so.

"Program for instructions" refers to software containing a set of instructions that, when executed by a processor, carry out a task. Ex. G, Cooklev Decl. at ¶ 59. In claim 19's context, the term connotes structure sufficient to avoid means-plus-function treatment. *See SyncPoint*, 2016 WL 55118, at *23 ("The term "instructions," like "detector" in *Personalized Media* and "circuit" in *Linear Technology*, connotes sufficiently definite structure to avoid invoking § 112, ¶ 6." (citing

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Personalized Media Commc'ns, L.L.C. v. Int'l Trade Comm'n, 161 F.3d 696, 704–05 (Fed. Cir. 1998); *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004))).

First, "'instruction' connotes structure." *SyncPoint*, 2016 WL 55118, at *23; *see also Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1008 (Fed. Cir. 2018) (holding that district court erred by "treat[ing] 'program' and 'user interface code' as nonce words"); *Ancora Techs., Inc. v. LG Elecs. Inc.*, No. 1:20-cv-34-ADA, 2020 WL 4825716, at *18 (W.D. Tex. Aug. 19, 2020) (holding that the claim term "agent" "does not function as a nonce word" where "the term is clearly limited to software in this case").

Second, claim 19 itself recites the objectives and operations of the instructions. *SyncPoint*, 2016 WL 55118, at *23. According to the claim, the "program of instructions" must be stored in memory, be executable by a processor and, when executed, should attempt access to a wireless network by sending a first preamble comprising a randomly selected signature sequence on a random access channel, and be able to re-attempt access by sending a second preamble comprising a signature sequence at a transmit power of no greater than that of the first attempt if it determines that the first attempt was unsuccessful. Ex. E, at claim 19; *see* Ex. G, Cooklev Decl. at ¶ 52. Memory, processors, random access channels, preambles, and signature sequences are well-understood structural components of electronic communication devices.

Third, a POSA would understand the structural arrangements of the program of instructions from the recited objectives and operations of the instructions. *SyncPoint*, 2016 WL 55118, at *23. In light of the '776 patent, a POSA would know how to set up software to send a signature sequence on a random access channel to attempt to access a wireless network, determine if the attempt was successful, and use that information to determine whether to re-attempt access.

In such circumstances, the claim language of claim 19 does not invoke § 112, ¶ 6. *See,*

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e.g., SyncPoint, 2016 WL 55118, at *24 (holding "that § 112, ¶ 6 does not apply to the 'Instructions

For' terms"); *Cypress Lake Software, Inc. v. Samsung Elecs. Am., Inc.*, 382 F. Supp. 3d 586, 642-

45 (E.D. Tex. 2019) (holding "instructions to" not to be a means-plus-function term).[6]

b.   The Phrase "Program of Instructions" Does Not Render the Claims Indefinite

OnePlus cannot prove by clear and convincing evidence that claim 19 is indefinite. The

Court should reject OnePlus's indefiniteness argument at the outset because it is predicated on

finding that "program of instruction" is a means-plus-function term, which it is not.

Even if, *arguendo*, "program of instructions" invoked § 112, ¶ 6, the specification discloses

sufficient structure to avoid a finding of indefiniteness. *See supra* § III.B.3.a. For example,

Figures 3 and 5 and their corresponding disclosures in the specification (Ex. E at 3:55-57, 3:61-

64, 5:30-8:37, 9:22-10:18) respectively provide a table of sequence selection and power control

and a flow chart showing the structure and algorithm of the claimed "program of instructions."

Ex. G, Cooklev Decl. at ¶¶ 61-64. Figure 6A and its corresponding disclosure in the specification

(Ex. E at 3:65-67, 10:19-11:25) provide a block diagram of showing the structural components of

the device, including memory on which a program of instructions is stored. Figure 6B and its

corresponding disclosure in the specification (Ex. E at 14:1-2, 11:26-12:35) provide further

structural details of the device, including interactions between memory and processors. In sum,

the '776 patent discloses sufficient structure and algorithm to perform the claimed functions of the

"program of instructions." Claim 19 is not indefinite.[7]

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[6] In contrast to *Dyfan*, claim 19 indicates to a POSA what information the program of instructions will generate and receive and how it will interact with other components to attempt access of a wireless network.

[7] To support its indefiniteness argument, OnePlus relies on *Function Media, LLC v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013). That case is inapt, however, because here, unlike there, the patent discloses the objectives and operations of the instructions. *See supra* § III.B.3.a.

IV.   U.S. PATENT NO. 8,767,614 ("THE '614 PATENT")

A.   Background

The '614 patent relates to controller apparatuses and related methods involving: from the user station end, sending a buffer information report from a relay node to a system station and sending an indication that the relay node has different buffering capabilities than the user station; and from the system station end, determining the buffering capabilities of the relay node based on the buffer information report and system station.   As summarized in the flowchart of Figure 4, the disclosed invention generally involves the following steps:
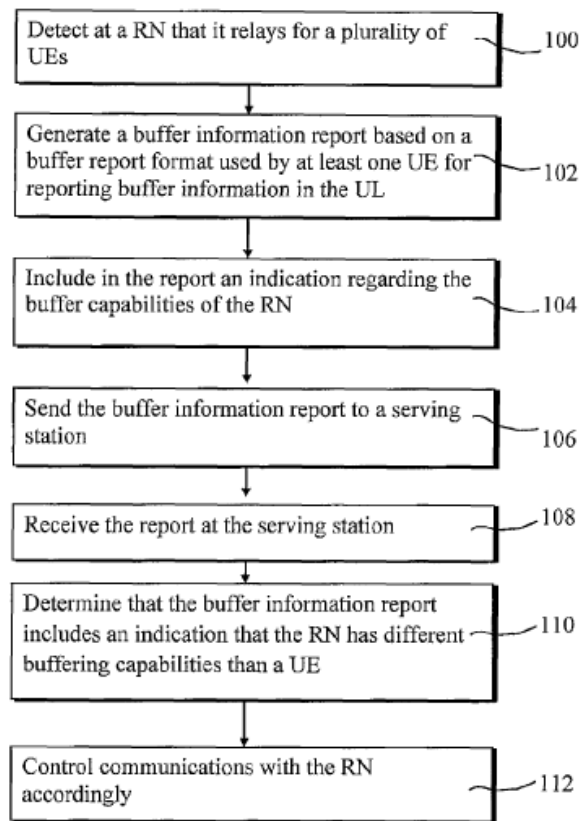

Fig. 4

WSOU is asserting against OnePlus claims 1, 2, 4-6, 13, 14, 16, and 17, of which claim 1 (drawn to a method comprising, *inter alia*, sending a buffer information report), claim 6 (drawn to an apparatus comprising means for same), claim 7 (drawn to a method comprising, *inter alia*,

receiving a buffer information report), claim 12 (drawn to an apparatus comprising means for same), and claim 13 (drawn to an apparatus configured to, *inter alia*, send a buffer information report) are independent claims.

B.   Disdisputed Terms[8]

1.   **"means for causing sending of a buffer information report to a system station" (Claim 6)**
"at least one processor; and at least one memory including computer program code the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus ... sending of a buffer information report to a system station" (Claim 13)

WSOU's Proposed Construction	OnePlus's Proposed Construction
These terms are not indefinite. No construction necessary – plain and ordinary meaning.	This claim should be construed under 35 U.S.C. 112, ¶6.
Claim 13 should not be construed under 35 U.S.C. § 112, ¶ 6. To the extent the Court treats the terms as means-plus-function:	Function: causing sending of a buffer information report to a system station.
	Structure: none disclosed.
Function: "for causing sending of a buffer information report"	The claim is indefinite.
Structure: processor and memory (refer 6:4-9)	

a.   **The Disputed Phrase in Claim 13 Does Not Invoke § 112, ¶ 6**

Unlike claim 6, claim 13 does not use the word "means." Claim 13 is directed to an "apparatus, comprising: at least one processor; at least one memory including computer program code[;] the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to perform at least the following: sending of a buffer information report to a system station from a node for relaying communications between at least one user station and the system station, the report being generated based on a report format used for uplink reporting by a user station; …" Ex. F, claim 13. The Court should adopt the phrase's

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[8] Claim terms of the '614 patent not disputed herein have their plain and ordinary meanings.

plain and ordinary meaning and reject OnePlus's contention that it is a means-plus-function term.

A presumption that the disputed phrase is not governed by § 112, ¶ 6 applies because claim 13 does not use the term "means." *Williamson*, 792 F.3d at 1350. OnePlus cannot rebut this presumption.

Claim 13 connotes sufficient structure to the disputed claim phrase. Contrary to OnePlus's argument (D.U. 32 at 19), "computer program code," "processor," and "memory" are all well-understood structural components of electronic devices and do not invoke § 112, ¶ 6 in the context of claim 13. *See, e.g., Zeroclick*, 891 F.3d at 1006-09 (holding "user interface code" did not invoke § 112, ¶ 6); *TecSec, Inc. v. Int'l Bus. Machines Corp.*, 731 F.3d 1336, 1347 (Fed. Cir. 2013) (holding "system memory means" and "digital memory means" did not invoke § 112, ¶ 6 because the claims provided sufficient structure to perform the stated function); *Ancora,* 2020 WL 4825716, at *18 (holding "agent" "does not function as a nonce word" where "the term is clearly limited to software in this case"); *Va. Innovation Scis., Inc. v. Amazon.com, Inc.*, No. 4:18-cv-474, 2019 WL 4259020, at *31-32 (E.D. Tex. Sept. 9, 2019) (holding "memory" and "program code" did not invoke § 112, ¶ 6 where the "claim recites substantial detail regarding the operations that the program code must be executable to perform, and additional context is provided"); *Intelligent Water Solutions, LLC v. Kohler Co.*, No. . 2:16-cv-689, 2017 WL 2444723, *21-*22 (E.D. Tex. June 5, 2017) (holding "memory means" did not invoke § 112, ¶ 6 because "the term 'memory' has a reasonably well-understood structural meaning and is sufficient structure for accomplishing the recited function"); *Cellular Commc'ns*, 2016 WL 7364266, at *15 ("'[P]rocessor' is not a 'nonce' term, but rather connotes a class of structures." (internal citation omitted)); *M2M Sols. LLC v. Sierra Wireless Am., Inc.*, No. CV 12-30-RGA, 2016 WL 1298961, at *6 (D. Del. Mar. 31, 2016) (holding "memory module" did not invoke § 112, ¶ 6).

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Claim 13 indicates to a POSA how the "computer program code," "processor," and "memory" interact with one another to send of a buffer information report to a system station, including by sending the information from a node for relaying communications between a user station and the system station, and generating the report based on report format used for uplink reporting by a user station. Ex. G, Cooklev Decl. at ¶¶ 66-70.

          b.   **The Claim Phrase "Means for Causing Sending of a Buffer Information Report to a System Station" Is a Means-Plus-Function Term Having a Structure of a Processor and Memory**

Unlike claim 13, claim 6 recites "means for causing sending of a buffer information report to a system station," a means-plus-function term with a function for causing sending of a buffer information report and a structure of processor and memory, as indicated in Figure 3 and the corresponding portion of the '614 patent specification:

FIG. **3** shows an example of a controller apparatus **30** for a relay node comprising at least one memory **31**, at least one data processing unit **32** and an input/output interface **34**. The control apparatus further comprises a buffering entity **33**. The controller may be configured to execute an appropriate software code to provide the desired control functionality.

Fig. 3
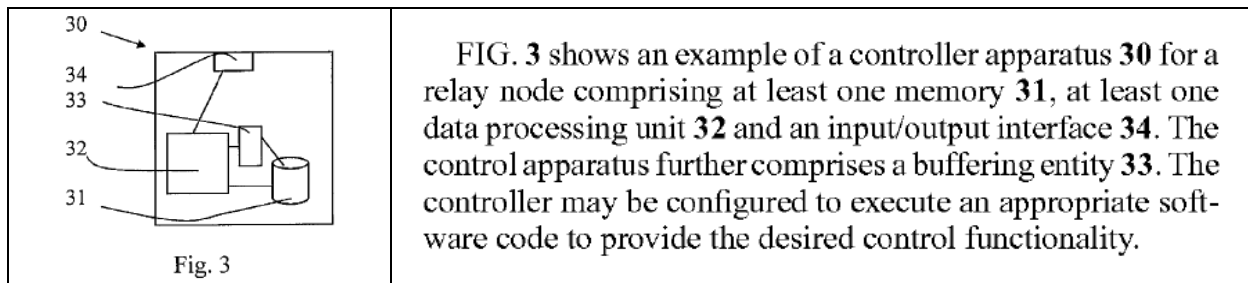
Ex. F at 6:4-9. A POSA would understand that the controller apparatus's processor and memory interact to output a buffer information report. Ex. G, Cooklev Decl. at ¶¶ 71-74.

          c.   **Claims 6 and 13 Are Not Indefinite**

OnePlus cannot prove by clear and convincing evidence that the disputed phrases in claims 6 and 13 are indefinite. As an initial matter, the Court should reject OnePlus's indefiniteness argument for claim 13 because it is predicated on finding that it is a means-plus-function claim, which it is not. But even if, *arguendo*, the Court were to treat it as means-plus-function, neither claims 6 nor 13 is indefinite.

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Contrary to OnePlus's contentions, the '614 patent discloses structure, including an algorithm, to achieve the recited function of sending a buffer information report to a system station. *See Realtime Data*, 2017 WL 2590195, at *16-17 ("An algorithm in the computer arts is a broad concept used 'to identify a step-by-step procedure for accomplishing a given result,' and may be expressed 'in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.'" (quoting *Typhoon Touch*, 659 F.3d at 1385; *Finisar*, 523 F.3d at 1340)).

As discussed above, Figure 3 and the corresponding portions of the specification provide a structural schematic for a controller apparatus that includes, among other things, a processor and memory. *See supra* § IV.B.1.b. In addition, Figure 4 and the corresponding portions of the specification (Ex. F at 4:50-51, 6:56-7:52) provide a flow chart for reporting buffer information using the control apparatus. These disclosures detail to a POSA the operations involved in, *inter alia*, generating a buffer information report based on a buffer report format used by at least one user station, the content of the report, and sending the buffer information report to a serving base station from a relay node. Ex. F at 7:11-43. The specification provides additional disclosure about the functions of and interactions between the processor, memory, and program code to provide the claimed functionality. *Id*. at 10:11-31. In light of these disclosures, a POSA would readily identify the structure in the specification for the disputed claim terms and associate it with the recited corresponding function of causing sending of a buffer information report to a system station. Ex. G, Cooklev Decl. at ¶ 74. Claims 6 and 13 are not indefinite.

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2.   **"means for causing sending of an indication to the system station"
(Claim 6)
"at least one processor; and at least one memory including computer
program code the at least one memory and the computer program
code configured to, with the at least one processor, cause the
apparatus . . . sending of an indication to the system station"
(Claim 13)**

WSOU's Proposed Construction	OnePlus's Proposed Construction
These terms are not indefinite. No construction necessary – plain and ordinary meaning.	This claim should be construed under 35 U.S.C. 112, ¶6.
Claim 13 should not be construed under 35 U.S.C. § 112, ¶ 6. To the extent the Court treats the terms in claims 6 and/or 13 as means-plus-function:	Function: causing sending of an indication to the system station. Structure: none disclosed.
Function: "for causing sending of an indication to the system station" Structure: processor and memory (refer 6:4-9)	The claim is indefinite.

a.   **The Disputed Phrase in Claim 13 Does Not Invoke § 112, ¶ 6**

Claim 13, which again does not use the word "means," is also directed to an "apparatus,

comprising: at least one processor; at least one memory including computer program code[;] the

at least one memory and the computer program code configured to, with the at least one processor,

cause the apparatus to perform at least the following: … sending of an indication to the system

station that the node for relaying has different buffering capabilities than the user station." Ex. F,

claim 13. For all the same reasons set forth above in § IV.C.1.a., the Court should apply the plain

and ordinary meaning of the disputed claim phrase and reject OnePlus's contention that it is a

means-plus-function term. Again, OnePlus cannot rebut the presumption that claim 13 does not

invoke § 112, ¶ 6. *Williamson*, 792 F.3d at 1350.

Like discussed above, claim 13 provides sufficient structure to achieve the recited function

of sending an indication to the system station. *See supra* § IV.B.1.a. Claim 13 indicates to a POSA

how the "computer program code," "processor," and "memory" interact with one another to send

an indication to the system station that the node for relaying has different buffering capabilities

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than the user station. Ex. G, Cooklev Decl. at ¶ 76.

          b.   **The Claim Phrase "Means for Causing Sending of an Indication to the System Station" Is a Means-Plus-Function Term Having a Structure of a Processor and Memory**

Unlike claim 13, claim 6 recites "means for causing sending of a buffer information report to a system station," which is a means-plus-function term with a function for causing sending of an indication to the system station and a structure of processor and memory, as indicated in Figure 3 and the corresponding portion of the '614 patent specification. *See* Ex. F at 6:4-9; *see supra* § IV.B.1.b. A POSA would understand from the patent that the controller apparatus's processor and memory interact to output an indication that the node for relaying has different buffering capabilities than the user station. Ex. G, Cooklev Decl. at ¶ 77.

          c.   **Claims 6 and 13 Are Not Indefinite**

OnePlus cannot prove by clear and convincing evidence that the disputed phrases in claims 6 and 13 are indefinite. The Court should reject OnePlus's indefiniteness argument for claim 13 because it is predicated on finding that it is a means-plus-function claim, which it is not. But even if, *arguendo*, the Court were to treat it as means-plus-function, neither claims 6 nor 13 is indefinite.

The '614 patent discloses structure, including an algorithm, to achieve the recited function of sending an indication to the system station. *See supra* § IV.B.1.c. As discussed above, Figure 3 and the corresponding portions of the specification provide a structural schematic for a controller apparatus that includes, among other things, a processor and memory. *See supra* § IV.B.2.b. In addition, Figure 4 and the corresponding portions of the specification (Ex. F at 4:50-51, 6:56-7:52) provide a flow chart for reporting buffer information using the control apparatus. These disclosures detail to a POSA the operations involved in, *inter alia*, sending an indication to the system station that the relay node has different buffering capabilities than the user station. Ex. F at Fig. 3, 7:26-52. The specification provides additional disclosure about the functions of and

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interactions between the processor, memory, and program code to provide the claimed functionality. *Id*. at 10:11-31. In light of these disclosures, a POSA would readily identify the structure in the specification for the disputed claim terms and associate it with the recited corresponding function of causing sending an indication to the system station. Ex. G, Cooklev Decl. at ¶ 78. Claims 6 and 13 are not indefinite.

        3.   **"the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to perform at least the following: process an indication that the buffer size of the node for relaying is extended from that of the user equipment and information of the size of the extension" (Claim 14)**

WSOU's Proposed Construction	OnePlus's Proposed Construction
Plain and ordinary meaning: This claim should not be construed under 35 U.S.C. § 112, ¶ 6, nor is it indefinite. If the Court deems a construction is necessary: "the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to perform at least the following: process a signal signifying that the buffer size of the intermediate node is extended from that of the user equipment and information of the size of the extension"	This claim should be construed under 35 U.S.C. 112, ¶6. Function: indefinite. Structure: indefinite. Alternatively: Function: processing an indication that the buffer size of the node for relaying is extended from that of the user equipment and information of the size of the extension. Structure: none disclosed. In either instance, the claim is indefinite. This proposed construction supersedes Defendant's Proposed Claim Constructions served on August 10, 2021

        a.   **The Disputed Phrase in Claim 14 Does Not Invoke § 112, ¶ 6**

Claim 14 depends from claim 13, and further recites: "wherein the at least one memory and the computer program code are further configured to, with the at least one processor, cause the apparatus to perform at least the following: process an indication that the buffer size of the node for relaying is extended from that of the user equipment and information of the size of the extension." OnePlus contends that claim 14 invokes § 112, ¶ 6 for all the same reasons it alleged

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for claim 13. *See* Dkt. 32 at 23. Accordingly, for all the same reasons set forth above for claim

13, OnePlus cannot overcome the presumption that claim 14 is not a means-plus-function claim.

Rather, the Court should apply claim 14's plain and ordinary meaning.

b.   The Phrase "Process an Indication" Is Not Indefinite

OnePlus cannot prove by clear and convincing evidence that the phrase "process an

indication" in claim 14 is indefinite. The Court should reject OnePlus's indefiniteness argument

at the outset to the extent it is predicated on finding that it is a means-plus-function claim, which

it is not. In any event, claim 14 is not indefinite.

As an initial matter, the plain language of claim 14 is sufficiently clear to a POSA, who

would understand that "process an indication" refers to the apparatus—including its processor(s)—

processing an indication by taking the information about buffer size into account and performing

operations on the data. Ex. G, Cooklev Decl. at ¶¶ 80-81. Such an understanding is consistent

with technical computing and electronics dictionaries, which generally define the verb "process"

to mean to perform an operation on data.[9]

The patent specification provides considerable details about the apparatus communicating

and taking into account information about buffer size for processing. Ex. G, Cooklev Decl. at

¶ 82. For example, columns 6-7 state: "In the described embodiments *buffer status reports (BSR)*

and/or any other appropriate metric is used to provide a mechanism for reflecting the buffer

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[9] *See, e.g.*, Ex. H, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, THE IEEE
STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONIC TERMS 821 (6th ed. 1997) ("**process**
… **(2)** … **(C)** (software) To perform operations on data."); Ex. I, GEORGE MCDANIEL,
INTERNATIONAL BUSINESS MACHINES, IBM DICTIONARY OF COMPUTING 532 (McGraw-Hill, 10th
ed. 2004) ("**process** … **(5)** To perform operations on data in a process."); Ex. J, AMERICAN
HERITAGE, DICTIONARY OF COMPUTER AND INTERNET WORDS 222 (Houghlin Mifflin Co. 2001)
("**process** … *v.* To perform an operation, such as sorting or calculating, on data."); Ex. K,
OXFORD UNIVERSITY PRESS, DICTIONARY OF COMPUTING 399 (6th ed. 2008) ("**process** … **2.** To
carry out the actions defined by the sequence of instructions that make up the code of a
program."). Exhibits H-K are attached to the accompanying Declaration of Joshua A. Whitehill.

size at the relay node and/or the buffer size at user equipments connecting to the relay node. In

the examples the relay node can send, for example, an extended BSR (E-BSR) to the donor eNB."

Ex. F at 6:62-7:1 (emphasis added). Column 7 also states that "the relay node may generate a new

report in accordance with the report format typically used by the user stations for uplink reporting,

and *include information regarding its buffer* at 104 to this newly generated report." *Id.* at 7:18-

22 (emphasis added). Column 7 further states:

> For example, *the relay node can include in the report an indication regarding the buffering capabilities thereof*. An example of such indication is *an indication that the relay node has different buffering capabilities from what would be the buffer capability of a user station it is serving, and shall therefore be treated differently*. The indication can be given, for example, in the form of *an indication of the size of the buffer of the relay node*. The size can be *indicated in various ways*, for example as a multiple of the buffer size of a user station, as a number of user stations served by the relay node, and so on. In the detailed examples below the indication is given by a buffer extension factor.

Id. at 7:30-41 (emphases added).[10]

Accordingly, a POSA would have a reasonably clear understanding about claim 14's scope.

Ex. G, Cooklev Decl. at ¶ 83. Claim 14 is not indefinite.

V.   CONCLUSION

WSOU respectfully requests that the Court adopt its proposed constructions and reject

each of OnePlus's indefiniteness arguments.

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[10] Other portions of the specification are consistent with the verb "process" generally referring to a processor taking data into account and performing operations on it. *See, e.g.*, Ex. F at 2:32-37 ("[T]he serving station can take the buffer status at the respective user equipments into consideration." The information assists in avoiding buffer overflows and unnecessary dropping of data connections due to unavailable uplink grants."), 6:51-55 ("With this information, the serving eNB can offer improved support for quality of service aware packet scheduling over the uplink, *taking into consideration the buffer statuses of the respective user equipments*."), 7:7-10 ("As shown in the flowchart of FIG. 4, the reporting mechanism is extended to cover also the backhaul link such that *the greater buffer sizes of the relay nodes can be taken into account*.").

Dated: September 14, 2021   RESPECTFULLY SUBMITTED,

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CERTIFICATE OF SERVICE

The undersigned counsel hereby certifies that on September 14, 2021, pursuant to Local

Rule CV-5, a true and correct copy of the foregoing document was served via the Court's CM/ECF

system on all parties who have appeared in this case.

/s/ Jonathan K. Waldrop
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